

## USDA RD Typical Mitigation Measures

### GENERAL NOTES FOR ALL 1794 REPORTS

This document is provided by USDA Rural Development to assist in the preparation of Environmental Reports under the RUS Bulletin 1794A-602 guidelines. Various mitigation measures have been listed, which may be used to reduce or eliminate identified impacts on natural resources resulting from Rural Development projects. One thing to remember, if there is no identified impact, there should be no mitigation stated. “No mitigation necessary” may be entered in the appropriate parts of the report, however, **arguments as to why there is no impact do not belong under the heading of mitigation.** For example, if the documentation indicates that pipelines will not pass through any hydric soils, nor are there any identified potential areas of hydric soils within the area of potential affect (APE) for the project, there should be no mitigation for impacts to wetlands. Many of the common activities during construction do not require mitigation, due to the insignificance of the potential impact, i.e., noise, dust, transportation. Potential significant impacts to water quality from a utility project are generally limited to wastewater discharge issues and sensitive aquifer areas. Mitigation is usually not necessary unless stipulated by TCEQ or an underground water district. However, due to the growing concern and public awareness of water quality and groundwater resources, **all reports should provide thorough analysis of the impacts of new water withdrawals from groundwater, and new discharges of wastewater or stormwater.**

To determine if there may be indirect impacts to farmland, floodplains or wetlands, maps should clearly show all of these resources in the service area. **ALL proposed improvements must be shown on ALL maps provided.** Do not submit USGS, soils, or wetland maps that do not clearly indicate where the work is being done. **Prime farmland and hydric soils adjacent to and within the area of potential effect (APE) for water or sewer lines should be colored in on soils maps. This means for 8” and larger water and wastewater lines prime soils must be colored in. For pipelines crossing hydric soils, all line sizes should be shown.** The APE varies according to the size of the pipeline, and whether it is a transmission, force main, service line, etc. The existence of “excess capacity” may not automatically indicate a greater APE, if the line is not intended to provide direct service. The APE for all service lines with excess capacity, **size 8” or larger**, may be shown as 300 feet from the center of the line in either direction. Prime farmland is not an issue if all work will be performed within city limits, and there will be no service outside of city limits. This land is considered “already converted” to non-agricultural use.

Critical facilities, such as water treatment plants, wastewater treatment plants, lift stations, hospitals, nursing homes, etc, should be placed above 500 year floodplain elevations, if at all possible. These should only be constructed within floodplain areas if there is no practicable alternative. In the event the entire service area is substantially outside of floodplain areas, the consultant has a sizeable burden of justification to document the need to locate facilities in floodplains. Current site ownership, or plans to add fill to a site are not adequate justification. Filling a floodplain may protect the improvement against flooding while at the same time increasing floodwaters in other locations.

**All mitigation measures should follow the language listed in these examples to the extent possible. It is not necessary to reinvent mitigation language for every project.**

**PRIME FARMLAND**

**DIRECT IMPACTS**

**Note - There are no mitigation measures for the direct conversion of prime farmland, rather the report should justify why there are no practicable alternatives to this conversion. Conversion only occurs when structures are built on prime farmland and the land is converted from agricultural use. Buried pipelines do not directly convert land use. If your project will convert prime farmland, you must contact the NRCS for a determination of whether the site warrants protection under the Farmland Protection Policy Act (FPPA). For areas that have significant amounts of prime farmland in the APE, and where excess capacity exists, use the following mitigation measure.**

**INDIRECT IMPACTS**

In order to promote compact community development and avoid the unwarranted conversion of prime farmland, the (owner) will develop a system map, which identifies areas within the service boundaries of the (owner) service area that have been designated as planned "growth corridors". These areas will be clearly identified on system maps approved by USDA Rural Development. The (owner) will adopt a resolution stating that it is the policy of the (owner) to promote compact community development.

\*\*\*\*\*

**FLOODPLAINS**

**NOTE: All flowing waters and their tributaries are considered "waters of the U.S." and fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE). For most pipeline projects which cross jurisdictional areas, Nationwide Permit 12 conditions will apply. Nationwide Permit 12 should be carefully reviewed to determine if the proposal will exceed the limits of the Permit, and whether a consultation with the USACE is necessary. Contact with the USACE is also necessary if any construction of facilities other than pipelines will be placed in jurisdictional areas. For pipelines which cross ANY stream, tributary, or which are in floodplain areas that cannot be determined to be non-jurisdictional, use one of these two mitigating measures to minimize the DIRECT impact of the project -**

**DIRECT IMPACTS Floodplains subject to NWP 12**

The (owner) and their consultant engineer shall insure that all requirements of the U.S. Army Corps of Engineers "Nationwide Permit 12" are complied with during the construction of the proposed project. This shall include the Nationwide TCEQ Permit Water Quality Certification Conditions. The construction plans, specifications and contract documents shall include all applicable provisions of "Nationwide Permit 12" and TCEQ permit conditions. Upon completion of the proposed improvements, the (owner) must sign and submit the required

certification to USDA Rural Development and the U.S. Army Corps of Engineers that the work, including any required mitigation, was completed in compliance with "Nationwide Permit 12."

**OR**

Water/sewer lines crossing the (name of river or stream) will be installed using boring procedures to place the line at least 12" below the river or stream bottom. All river or stream bank surface activities will be conducted in accordance with Nationwide Permit 12 requirements. Native vegetative cover will be re-established to the extent practicable and no fill will be allowed. Upon completion of the proposed improvements, the (owner) must sign and submit the required certification to the U.S. Army Corps of Engineers District Office that the work, including any required mitigation, was completed in compliance with "Nationwide Permit 12."

**DIRECT IMPACTS – Floodplains/wetlands not subject to NWP 12 (this will apply to geographically isolated wetlands, or creek crossings which the USACE has determined to be non-jurisdictional)**

Sedimentation and erosion control measures will be required for all floodplain areas. The project specifications will state that all construction in floodplain areas will be restored to pre-project conditions. Native vegetative cover will be restored to the extent practicable and no fill will be allowed.

\*\*\*\*\*

## INDIRECT IMPACT TO FLOODPLAINS

**NOTE: The possible INDIRECT impact to floodplains must be considered if there are a significant amount of "buildable" areas within floodplains in the service area. A creek crossing 30 feet wide and 10 feet deep would not be considered "buildable", and therefore would not require mitigation for INDIRECT impacts. Please be aware that, although we will accept the "no-tap" restrictive mitigation measure listed below, this may conflict with the utility system's TCEQ requirement to serve customers. A system may not elect to use the more restrictive limitation on floodplain development, and then advise service applicants that "USDA will not allow them to serve anyone in a floodplain." These apply only to projects that have the capacity to provide service in 100 year floodplain areas -**

### Floodplains - INDIRECT IMPACTS

The (owner) will enact a binding resolution or covenant to prohibit service to structures proposed to be built in 100-year floodplains. Such covenant or resolution will be in place prior to USDA Rural Development's approval of final plans and specifications. Along with a copy of the resolution or covenant, the (owner) will provide evidence satisfactory to USDA Rural Development that the covenant or resolution is fully enforceable and has been adopted in a manner consistent with all applicable local and State requirements.

**OR**

The (owner) shall adopt a resolution that will resolve and assure that the (owner) will not extend (water/sewer) service to new development, on lots that are within the 100-year floodplain, as identified by the Federal Emergency Management Administration (FEMA), without the following:

1. On-site sewage disposal facilities shall be approved by (local health authority), Be in accordance with local requirements for development within the 100-year floodplain, and meet TCEQ regulations. Evidence that all required permits have been obtained with respect to the onsite sewage disposal facility should be demonstrated.
2. The floor elevation of the structure shall be a minimum of 1.0 feet above the established 100-year floodplain in areas where flood insurance is available.
3. The (owner) shall obtain an agreement from the (local authority for the flood management plan) that any request for water service in a 100-year floodplain shall include a review by the (local authority for the flood management plan) and insure the development complies with the local Flood Management Plan as approved by FEMA. .

\*\*\*\*\*

### **WETLANDS**

**NOTE: If wetlands will be crossed by pipelines, use the mitigation listed below for direct impacts. NO BUILDINGS OR NON-PIPELINE FACILITIES MAY BE CONSTRUCTED IN A WETLAND. Mitigation for indirect impacts is only necessary if there are significant "buildable" wetlands in the service area. In accordance with the definition of wetlands from the USACE, if there are no hydric soils present, there are no wetlands. However, NRCS soils maps may not indicate small inclusions of hydric soils which are actually wetlands. Utilizing a combination of NRCS soils maps, the National Wetland Inventory (NWI) map, and onsite inspection, the preparer of the ER should attempt to identify all areas which may be considered wetlands. In some cases, a wetland delineation by a professional biologist or environmental professional may be necessary.**

### **DIRECT IMPACTS**

The (owner) and their consultant engineer shall insure that all requirements of the U.S. Army Corps of Engineers "Nationwide Permit 12" are complied with during the construction of the proposed project. This shall include the TCEQ Nationwide Permit Water Quality Certification Conditions. The construction plans, specifications and contract documents shall include all applicable provisions of "Nationwide Permit 12" and TCEQ permit conditions. Upon completion of the proposed improvements, the (owner) must sign and submit the required certification to RD that the work, including any required mitigation, was completed in compliance with "Nationwide Permit 12."

### **INDIRECT IMPACTS**

To mitigate potential development in wetlands, (owner) will enact a binding resolution or covenant to prohibit service to areas where wetlands exist, without verification that the proper the U.S. Army Corps of Engineers, Section 404 permits have been obtained. A copy of the wetlands map indicating wetland areas will be maintained by the (owner). Such resolution or covenant must be in place prior to any USDA Rural Development's approval of final plans and specifications. Along with a copy of the resolution or covenant, the (owner) must provide evidence satisfactory to USDA Rural Development that the resolution or covenant is fully enforceable and has been adopted in a manner consistent with all applicable local and state requirements.

#### Sample Resolution

"To prohibit service in wetland areas, (Owner) shall review all applications for service in areas of potential wetlands. The attached system map as developed by (Engineering Firm) as part of the environmental report defines the potential wetland areas. Where wetlands may be impacted by the development, the (Owner) shall insure that the applicant has complied with the appropriate U.S. Army Corps of Engineers 404 permit process prior to providing water service."

\*\*\*\*\*

### **BIOLOGICAL RESOURCES / ENDANGERED SPECIES**

**NEW\*\*\*\*** Part of the responsibility of the environmental review process is for the Agency to make a determination of “no affect” no significant affect” or “may affect.” endangered species. Although consultants have historically written the USFWS for “comments”, the process has changed. The preparer of the ER must first obtain a list of endangered species for the counties where the project is located (<http://ifw2es.fws.gov/EndangeredSpecies/lists/>). A list of State listed species and additional information should also be obtained from the Texas Parks and Wildlife Department. The list must be analyzed and a biological evaluation be done to determine the potential level of effect for the project. If a “may effect” determination is made by the preparer of the ER, the SEC should be contacted prior to USFWS consultation. For all “no significant affect” or “may affect” determinations, a letter should be sent to the USFWS area office **with supporting documentation** notifying them of the determination. The USFWS will either not respond, advise you they do not need to see the info, concur, request additional information, or advise that formal consultations are required.

Mitigation measures are appropriate for specific situations to reduce or eliminate potential effects. Mitigation measures will be specific to the endangered or threatened specie(s) which may be adversely affected by the project. The U.S. Fish and Wildlife Service can provide specific recommendations for specie(s) which may be affected. If the USFWS indicates there will likely be no effect on endangered or threatened species, mitigation is unnecessary. **If specific endangered specie(s) habitat exists within the project area, a map marked “Endangered Species habitat for the (applicable specie)” must be made a part of the report.** It is not possible for a contractor to avoid habitat areas, if these areas have not been

previously identified. Unless the consultant plans to mark specific trees, language such as “The contractor will avoid large trees” is too ambiguous and vague to be accepted. Never insert mitigation that states “If endangered species are encountered, or “discovered” during construction ...” unless there will be a biologist onsite during construction.

Here are some **EXAMPLES ONLY**, which may vary according to circumstances and USFWS recommendations:

### **Houston Toad**

To avoid impacts to potential populations of the Houston Toad, (applicant) will require the following construction conservation measures-

- a) All construction activities will be conducted within existing Right-of- Ways where HT habitat is indicated on the attached project map dated \_\_\_\_.
- b) Construction in areas of potential habitat is to occur outside the primary breeding season (February and March) and there will be no clearing of native woody vegetation within an area of potential habitat.
- c) All trenches shall be backfilled as the pipeline is constructed and at the end of the day. To preserve the friability of soils the toad requires, soil compaction should be avoided and the natural topography of the area should be maintained.
- d) If a suspected Houston Toad is found, it should be carefully removed and placed unharmed in a protected area outside the project area. A qualified biologist and Rural Development representative shall be immediately notified.

### **Navasota Ladies' Tresses**

Based on an initial field reconnaissance and existing soil surveys, the potential habitat for the Navasota Ladies'-Tresses and Large-Fruited Sand Verbena has been defined on the attached project map dated \_\_/\_\_/\_\_. Prior to construction of the proposed waterlines, the areas marked for potential Navasota Ladies'-Tresses shall be surveyed by a qualified biologist in the Fall (October -November) immediately preceding project construction. The areas marked for potential Large-Fruited Sand Verbena shall be surveyed in the Spring /Summer immediately preceding project construction. If either or both of these plant species is found, construction shall be re-routed to avoid impacting the species.

### **Golden-cheeked Warbler/Black-capped Vireo**

Where construction will not affect identified habitat, as shown of the attached map marked Exhibit \_\_, work may be conducted uninhibited year round. In areas specifically identified to contain habitat, no work shall be conducted between March 1st and August 31st, and all clearing will be limited to widths of no more than 16 feet. In addition, the (owner) shall review all future

service connections in areas where habitat exists, to verify that the potential users will not impact the species.

### **Texas Horned Lizard**

To avoid potential harm to the Texas Horned Lizard (THL), the Consultant Engineer and applicant will be responsible for implementing the following measures: 1) All construction personnel will be instructed to avoid killing, injuring, or any type harmful disturbance to the THL during construction; 2) Pipeline trenches which remain open overnight, and or for more than two daylight hours will be inspected for the presence of the THL prior to backfilling; 3) Texas Horned Lizards discovered in any open trench will be carefully removed and relocated safely away from the construction area; 4) Any THL relocation(s) by construction crews will be reported to the Consulting Engineer and USDA State Environmental Coordinator at (254) 742-9795.

### **Native Species Re-vegetation**

In accordance with Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping, reseeding landscaping will be limited to seeding and replanting with native species, where possible. A mixture of grasses and forbs appropriate to address potential erosion problems and long-term cover will be planted when seed is reasonably available.

### **Migratory Bird Treaty Act**

To comply with the Migratory Bird Treaty Act; 1) vegetation disturbances will either avoid the general nesting period of March 1st through August 31st, or, 2) areas proposed for disturbance will be inspected for nesting birds immediately prior to construction activities, in order to avoid the inadvertent destruction of nests, eggs, etc. Any nests discovered which may be disturbed or destroyed should be reported to the U.S. Fish and Wildlife Service for further guidance.

\*\*\*\*\*

## **CULTURAL RESOURCES**

**Note: The standard "discovery" mitigation measure listed below should be placed in all reports. The second measure below is only necessary if SHPO has noted certain areas that may have archeological significance.**

- ◆ The THC has issued a "No Effect" determination on \_\_\_\_\_. If cultural materials are encountered during construction, work will cease in the immediate area of the discovery. Work may continue in those project locations outside of the discovery area, with written approval from USDA Rural Development. In the event of discovery, the contractor must immediately notify the Owner, Project Engineer, the Texas Historical Commission (512) 463-5867, and the USDA Rural Development State Environmental Coordinator (512) 863-6502.

**OR for those areas with specific locations to be avoided -**

- ◆ Excavation of the trench in the area identified as Site \_\_\_\_\_ of the (applicant's) proposed water pipeline, is to be monitored by a professional archaeologist. If cultural materials are encountered during construction at Site \_\_\_\_\_, work must cease in the immediate area and the contractor must immediately notify the Owner, Project Engineer, the Texas Historical Commission (512) 463-5867, and the USDA Rural Development State Environmental Coordinator (512) 863-6502."

\*\*\*\*\*

**Environmental Justice**

**E.O. 12898**, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994) requires that Federal agencies "shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

**USDA Departmental Regulation 5600-2**, Environmental Justice, Section 8, requires USDA agencies to use their environmental review process under the National Environmental Policy Act to "analyze the environmental effects of proposed Federal actions, including human health, economic, and social effects on minority and low-income populations".

One of the tools/data to analyze the potential environmental effects to these populations is demographic information. **The following USEPA website is a good tool to assist in this analysis - <http://www.epa.gov/enviro/ej/index.html>.** A map may be printed from this site to help document the location of minority populations in relation to project improvements.